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Volume 44, Issue 6, June 1999 Page(s):1157 - 1165
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Vadigepalli, R.; Doyle, F.J., III;
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Skogestad, S.; Morari, M.; Doyle, J.C.;
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Tham, M.T.; Vagi, F.; Morris, A.J.; Wood, R.K.;
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Kumar, A.; Daoutidis, P.;
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- ☐ 5. Robust multivariable feedback design for an extractive distillation column
 Nataraj, P.S.V.;
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Nataraj, P.S.V.;
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1 [Waveform relaxation for concurrent dynamic simulation of distillation columns](#)



A. Skjellum, M. Morari, S. Nattisson

 January 1989 **Proceedings of the third conference on Hypercube concurrent computers and applications - Volume 2**

Publisher: ACM Press

Full text available: pdf(878.57 KB)

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The need for cost-effective, high-speed computing is essential in many aspects of chemical engineering practice, notably for the simulation of large-scale dynamic systems. The arrival of powerful, highly concurrent message-passing multicomputers potentially offers such economical large-scale computing capability [13,14]. Development of appropriate, efficient algorithms which realize this potential must therefore become an important area of ongoing research and development in chemical engine ...

2 [Sparse matrix methods for chemical process separation calculations on supercomputers](#)



S. E. Zitney

 December 1992 **Proceedings of the 1992 ACM/IEEE conference on Supercomputing**

Publisher: IEEE Computer Society Press

Full text available: pdf(938.87 KB)

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3 [Parallel triangular decompositions of an oil refining simulation](#)



Xiaodong Zhang

 August 1993 **Proceedings of the 7th international conference on Supercomputing**

Publisher: ACM Press

Full text available: pdf(856.77 KB)

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One important process in oil refining is to separate the crude oil into various oil products. This process is called distillation. In designing a complex distillation column, a large computer simulation is conducted. This paper presents our experience with parallelizing an oil refining simulation application that computes the composition of the various oil products in designed refining columns operated under a given set of conditions. Mathematical models for the simulation ...

4 Token+constraint systems for tangible interaction with digital information



Brygg Ullmer, Hiroshi Ishii, Robert J. K. Jacob

March 2005 **ACM Transactions on Computer-Human Interaction (TOCHI)**, Volume 12 Issue 1

Publisher: ACM Press

Full text available: [pdf\(3.96 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We identify and present a major interaction approach for tangible user interfaces based upon systems of tokens and constraints. In these interfaces, tokens are discrete physical objects which represent digital information. Constraints are confining regions that are mapped to digital operations. These are frequently embodied as structures that mechanically channel how tokens can be manipulated, often limiting their movement to a single degree of freedom. Placing and manipulating tokens within sys ...

Keywords: Tangible interfaces, token+constraint interfaces

5 Visualization of parallel and distributed systems: Visualizing structural properties of irregular parallel computations



Wolfgang Blochinger, Michael Kaufmann, Martin Siebenhaller

May 2005 **Proceedings of the 2005 ACM symposium on Software visualization**

Publisher: ACM Press

Full text available: [pdf\(403.47 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

An important task in parallel programming is the appropriate distribution of work on the processors. This distribution is usually dynamically changing and hard to predict, further it is very sensitive to the change of parameters. Even with advanced analysis tools this problem is hard to be solved. We propose to visualize the program structure as it changes over the execution time. We therefore present a new automatic layout algorithm based on Sugiyama's framework, which enables the user to detect ...

Keywords: interactive performance tuning, visualization of parallel execution graphs

6 Using meta-level compilation to check FLASH protocol code



Andy Chou, Benjamin Chelf, Dawson Engler, Mark Heinrich

November 2000 **ACM SIGOPS Operating Systems Review , ACM SIGARCH Computer Architecture News , Proceedings of the ninth international conference on Architectural support for programming languages and operating systems ASPLOS-IX**, Volume 34 , 28 Issue 5 , 5

Publisher: ACM Press

Full text available: [pdf\(297.02 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Building systems such as OS kernels and embedded software is difficult. An important source of this difficulty is the numerous rules they must obey: interrupts cannot be disabled for ~too long," global variables must be protected by locks, user pointers passed to OS code must be checked for safety before use, etc. A single violation can crash the system, yet typically these invariants are unchecked, existing only on paper or in the implementor's mind. This paper is a case study in how system impl ...

7 Using meta-level compilation to check FLASH protocol code



Andy Chou, Benjamin Chelf, Dawson Engler, Mark Heinrich

November 2000 **ACM SIGPLAN Notices**, Volume 35 Issue 11

Publisher: ACM Press

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Building systems such as OS kernels and embedded software is difficult. An important source of this difficulty is the numerous rules they must obey: interrupts cannot be disabled for "too long," global variables must be protected by locks, user pointers passed to OS code must be checked for safety before use, etc. A single violation can crash the system, yet typically these invariants are unchecked, existing only on paper or in the implementor's mind. This paper is a case study in how system impl ...

8 Integrating the document object model with hyperlinks for enhanced topic distillation and information extraction



Soumen Chakrabarti

April 2001 **Proceedings of the 10th international conference on World Wide Web**

Publisher: ACM Press

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Keywords: document object model, minimum description length principle, segmentation, topic distillation


9 E-speak e-xplained



Alan H. Karp

July 2003 **Communications of the ACM**, Volume 46 Issue 7

Publisher: ACM Press

Full text available:  [pdf\(181.92 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)
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HP's e-speak is an open software platform designed to simplify Internet-based e-services by making it easier for unrelated Web sites to work together.

10 Robots, after all



Hans Moravec

October 2003 **Communications of the ACM**, Volume 46 Issue 10

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Artificial minds for mechanical bodies capable of autonomous manual work finally seem within reach.


11 Enhanced topic distillation using text, markup tags, and hyperlinks



Soumen Chakrabarti, Mukul Joshi, Vivek Tawde

September 2001 **Proceedings of the 24th annual international ACM SIGIR conference on Research and development in information retrieval**

Publisher: ACM Press

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Topic distillation is the analysis of hyperlink graph structure to identify mutually reinforcing authorities (popular pages) and hubs (comprehensive lists of links to authorities). Topic distillation is becoming common in Web search engines, but the best-known algorithms model the Web graph at a coarse grain, with whole pages as single nodes. Such models may lose vital details in the markup tag structure of the pages, and thus lead to a tightly linked irr ...

12 Modelling activities in information systems using the coordination language ☐**MANIFOLD**


George A. Papadopoulos, Farhad Arbab

February 1998 **Proceedings of the 1998 ACM symposium on Applied Computing****Publisher:** ACM PressFull text available:  [pdf\(964.38 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

Keywords: collaborative computing environments, coordination languages and moels, design of distributed and open information systems, modelling information systems

13 Adapting to network and client variability via on-demand dynamic distillation ☐

Armando Fox, Steven D. Gribble, Eric A. Brewer, Elan Amir

October 1996 **ACM SIGOPS Operating Systems Review , ACM SIGPLAN Notices , Proceedings of the seventh international conference on Architectural support for programming languages and operating systems ASPLOS-VII**, Volume 30 , 31 Issue 5 , 9**Publisher:** ACM PressFull text available:  [pdf\(1.64 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


The explosive growth of the Internet and the proliferation of smart cellular phones and handheld wireless devices is widening an already large gap between Internet clients. Clients vary in their hardware resources, software sophistication, and quality of connectivity, yet server support for client variation ranges from relatively poor to none at all. In this paper we introduce some design principles that we believe are fundamental to providing "meaningful" Internet access for the entire range of ...

14 A data modeling approach for office information systems ☐

Simon Gibbs, Dionysis Tsichritzis

October 1983 **ACM Transactions on Information Systems (TOIS)**, Volume 1 Issue 4**Publisher:** ACM PressFull text available:  [pdf\(1.23 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)15 Distilling dialogues: a method using natural dialogue corpora for dialogue systems development ☐

Arne Jönsson, Nils Dahlbäck

April 2000 **Proceedings of the sixth conference on Applied natural language processing****Publisher:** Morgan Kaufmann Publishers Inc.Full text available:  [pdf\(742.57 KB\)](#)[Publisher Site](#)Additional Information: [full citation](#), [abstract](#), [references](#)

We report on a method for utilising corpora collected in natural settings. It is based on distilling (re-writing) natural dialogues to elicit the type of dialogue that would occur if one the dialogue participants was a computer instead of a human. The method is a complement to other means such as Wizard of Oz-studies and un-distilled natural dialogues. We present the distilling method and guidelines for distillation. We also illustrate how the method affects a corpus of dialogues and discuss the ...

16 The ITHACA office object model: modeling and implementation ☐

James S. K. Ang, D. W. Conrath



November 1993 **ACM SIGMIS Database**, Volume 24 Issue 4

Publisher: ACM Press

Full text available: [pdf\(840.73 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)

This paper presents an object-oriented approach to modeling an office, including both its content and the activities that are carried out within it. This is a part of a larger research effort---the ITHACA Project (Integrated Toolkit for Highly Advanced Computer Applications). Its purpose is to provide software engineers and application programmers with a generic framework within which to develop large, distributed office support systems. The set of interrelated models contains: the active object ...

17 Poster Session: Web-centric language models



Jaap Kamps

October 2005 **Proceedings of the 14th ACM international conference on Information and knowledge management CIKM '05**

Publisher: ACM Press

Full text available: [pdf\(158.62 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We investigate language models for informational and navigational web search. Retrieval on the web is a task that differs substantially from ordinary ad hoc retrieval. We perform an analysis of prior probability of relevance for a wide range of non-content features, shedding further light on the importance of non-content features for web retrieval. This directly explains the success or failure of various techniques, e.g., why the link topology is particularly helpful to single out important site ...

Keywords: language models, non-content information, priors, web retrieval

18 A simulation model of GECOS III



Kenneth E. Norland, William C. Bulgren

January 1971 **Proceedings of the 1971 26th annual conference**

Publisher: ACM Press

Full text available: [pdf\(1.39 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A simulation model for a multiprogramming operating system has been devised and programmed in Simscript. Essential elements of the environment have been included such as job arrival rate, maximum number of jobs, the operating system overhead and peripheral and core allocation. Some allowances are made for time-sharing, as well as remote and normal batch jobs. The model is patterned basically after GECOS III, on the H-600 line computer. The hardware constraints considered when necessary are ...

Keywords: Computer system analysis, Multiprogramming, Simulation

19 Office information models and the representation of 'office objects'



Simon J. Gibbs

June 1982 **ACM SIGOA Newsletter , Proceedings of the SIGOA conference on Office information systems**, Volume 3 Issue 1-2

Publisher: ACM Press

Full text available: [pdf\(609.73 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Office information models are used to represent the operations and information structure of Office Information Systems. This paper determines requirements for these models by examining the functionality of Office Information Systems. The paper then discusses the representation of 'office objects' and their associated operations of filing, mailing and

formatting. This representation is based upon concepts from the field of semantic data modelling.


20 Manufacturing applications: Manufacturing modeling architectures: architectural concepts for a system simulator for concurrent prototyping of equipment and controls



K. Preston White, Ryan Fritz, Stephen Horvath, Carlos Orellana, Jonathan Wohlers, Richard G. Fairbrother, William S. Terry

December 2002 **Proceedings of the 34th conference on Winter simulation: exploring new frontiers**

Publisher: Winter Simulation Conference

Full text available:  pdf(234.87 KB) Additional Information: [full citation](#), [abstract](#), [references](#)

AutoMod® is a leading discrete-event simulation package widely applied in the modeling and analysis of distribution systems. Included in the AutoMod software suite is the Model Communications Module (MCM), which allows an executing simulation to open socket connections and to send and receive messages via TCP/IP network protocol. In this paper we report on a pilot study which explores the functionality of the MCM. In particular, we develop and implement an architecture that can be used to ...

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5. ☐ **The application of the substitute objective function minimization for solving multi-stage separation problems • ARTICLE**
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G. E. Paules, IV and C. A. Floudas
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7. ☐ **Extension of the simultaneous-solution and inside-outside algorithms to distillation with chemical reactions • ARTICLE**
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Computers & Chemical Engineering, Volume 22, Supplement 1, 15 March 1998, Pages S371-S378
 L. U. Kreul, A. Górak, C. Dittrich and P. I. Barton
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 R. Krishna and J. A. Wesselingh
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Fusion Engineering and Design, Volume 28, 2 March 1995, Pages 406-412
 D. A Sarigiannis
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 Saibal Ganguly and Deoki N. Saraf
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 H. -E. Musch and M. Steiner
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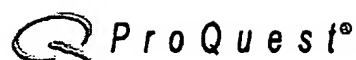
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by Papastathopoulou, Heleni S., Ph.D., Lehigh University, 1990, 262 pages; AAT 9030343

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SEPARATION PROCESS SIMULATION AND DESIGN**
by KRISHNAMURTHY, R., Ph.D., Clarkson University, 1984, 221 pages; AAT 8418009

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PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050222474 A1

TITLE: Oxygenated hydrocarbon compositions and method for recovering the compositions

PUBLICATION-DATE: October 6, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
<u>Cheng</u> , Minquan	Evansville	IN	US
Nicoletti, Michael Peter	Houston	TX	US

US-CL-CURRENT: 585/15; 585/809

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMAC	Drawn De
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File: PGPB

Apr 28, 2005

PGPUB-DOCUMENT-NUMBER: 20050091020

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050091020 A1

TITLE: High fidelity low-order modeling for multi-staged separation processes based upon the compartmental approach

PUBLICATION-DATE: April 28, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
<u>Cheng</u> , Wai Biu	Willoughby	OH	US

US-CL-CURRENT: 703/12; 700/273

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 3. Document ID: US 20030220187 A1

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File: PGPB

Nov 27, 2003

PGPUB-DOCUMENT-NUMBER: 20030220187

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030220187 A1

TITLE: Composite for catalytic distillation and its preparation

PUBLICATION-DATE: November 27, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Yang, Yuanyi	Beijing		CN
Li, Dongfeng	Beijing		CN
Dai, Wei	Beijing		CN
Chen, Shuo	Beijing		CN
Wang, Guoqing	Beijing		CN
Liao, Lihua	Beijing		CN
<u>Cheng</u> , Jianmin	Beijing		CN
Guo, Yanlai	Beijing		CN
Peng, Hui	Beijing		CN

US-CL-CURRENT: 502/60; 502/159, 502/325, 502/344, 585/250, 585/446

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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File: PGPB

Jul 10, 2003

PGPUB-DOCUMENT-NUMBER: 20030130555

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030130555 A1

TITLE: Oxygenated hydrocarbon compositions and method for recovering the compositions

PUBLICATION-DATE: July 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
<u>Cheng</u> , Minquan	Evansville	IN	US
Nicoletti, Michael Peter	Houston	TX	US

US-CL-CURRENT: 585/804; 585/638, 585/639, 585/640, 585/809

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☐ 5. Document ID: US 20030045655 A1

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File: PGPB

Mar 6, 2003

PGPUB-DOCUMENT-NUMBER: 20030045655

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030045655 A1

TITLE: PROCESS OF REMOVING CONTAMINANTS FROM AN OLEFIN STREAM USING EXTRACTIVE
DISTILLATION

PUBLICATION-DATE: March 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Hendriksen, Dan E.	Phillipsburg	NJ	US
<u>Cheng</u> , Minquan	Evansville	IN	US
Kuechler, Keith H.	Friendswood	TX	US
Lumgair, David R.	Craddockville	VA	US
Nicoletti, Michael P.	Houston	TX	US
Shutt, Richard	Tervuren		BE

US-CL-CURRENT: 526/77

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw D
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☐ 6. Document ID: US 6559248 B2

L3: Entry 6 of 7

File: USPT

May 6, 2003

US-PAT-NO: 6559248

DOCUMENT-IDENTIFIER: US 6559248 B2

TITLE: Process of removing contaminants from an olefin stream using extractive
distillation

DATE-ISSUED: May 6, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hendriksen; Dan E.	Phillipsburg	NJ		
<u>Cheng</u> ; Minquan	Evansville	IN		
Kuechler; Keith H.	Friendswood	TX		
Lumgair; David R.	Craddockville	VA		
Nicoletti; Michael P.	Houston	TX		
Shutt; Richard	Tervuren			BE

US-CL-CURRENT: [526/77](#); [203/63](#), [203/66](#), [203/95](#), [585/639](#), [585/836](#), [585/864](#), [585/868](#)

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☐ 7. Document ID: US 4743344 A

L3: Entry 7 of 7

File: USPT

May 10, 1988

US-PAT-NO: 4743344

DOCUMENT-IDENTIFIER: US 4743344 A

TITLE: Treatment of wastes from high purity silicon process

DATE-ISSUED: May 10, 1988

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Breneman; William C.	Vancouver	WA		
Yang; Chi-Cheng	Beaverton	OR		
Henningsen; Gunnar	Birmingham	AL		

US-CL-CURRENT: [203/81](#); [159/47.3](#), [423/341](#), [423/342](#)

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Jan 5, 2006

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DOCUMENT-IDENTIFIER: US 20060004229 A1

TITLE: Preparation of acrylic acid by heterogeneously catalyzed partial gas phase oxidation of propylene

PUBLICATION-DATE: January 5, 2006

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Dieterle; Martin	Mannheim		DE
Muller-Engel; Klaus Joachim	Stutensee		DE
Hechler; Claus	Ludwigshafen		DE
Hammon; Ulrich	Mannheim		DE
Diefenbacher; Armin	Germersheim		DE

US-CL-CURRENT: 562/527

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DOCUMENT-IDENTIFIER: US 20050091020 A1

TITLE: High fidelity low-order modeling for multi-staged separation processes based upon the compartmental approach

PUBLICATION-DATE: April 28, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Cheng, Wai Bui	Willoughby	OH	US

US-CL-CURRENT: 703/12; 700/273

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw De
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File: PGPB

Mar 10, 2005

PGPUB-DOCUMENT-NUMBER: 20050054814

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050054814 A1

TITLE: Polyester process using a pipe reactor

PUBLICATION-DATE: March 10, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
DeBruin, Bruce Roger	Kingsport	TN	US

US-CL-CURRENT: 528/308.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw De
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☐ 4. Document ID: US 20040230025 A1

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File: PGPB

Nov 18, 2004

PGPUB-DOCUMENT-NUMBER: 20040230025

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040230025 A1

TITLE: Polyester process using a pipe reactor

PUBLICATION-DATE: November 18, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
DeBruin, Bruce Roger	Kingsport	TN	US

US-CL-CURRENT: 528/271; 528/308.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw De
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☐ 5. Document ID: US 20040182786 A1

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File: PGPB

Sep 23, 2004

PGPUB-DOCUMENT-NUMBER: 20040182786

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040182786 A1

TITLE: Purification of fluid compounds utilizing a distillation - membrane
separation process

PUBLICATION-DATE: September 23, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Colling, Craig W.	Warrenville	IL	US
Huff, George A. JR.	Naperville	IL	US
Pietsch, Stephen J.	Naperville	IL	US

US-CL-CURRENT: 210/640; 210/321.6

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☐ 6. Document ID: US 20040044170 A1

L5: Entry 6 of 21

File: PGPB

Mar 4, 2004

PGPUB-DOCUMENT-NUMBER: 20040044170

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040044170 A1

TITLE: Polyester process using a pipe reactor

PUBLICATION-DATE: March 4, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
DeBruin, Bruce Roger	Kingsport	TN	US

US-CL-CURRENT: 528/272; 422/129, 528/300, 528/308.1, 528/308.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Draw. De
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☐ 7. Document ID: US 20020137877 A1

L5: Entry 7 of 21

File: PGPB

Sep 26, 2002

PGPUB-DOCUMENT-NUMBER: 20020137877

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020137877 A1

TITLE: Low cost polyester process using a pipe reactor

PUBLICATION-DATE: September 26, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Debruin, Bruce Roger	Kingsport	TN	US

US-CL-CURRENT: 528/272

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 8. Document ID: US 6906164 B2

L5: Entry 8 of 21

File: USPT

Jun 14, 2005

US-PAT-NO: 6906164

DOCUMENT-IDENTIFIER: US 6906164 B2

TITLE: Polyester process using a pipe reactor

DATE-ISSUED: June 14, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
DeBruin; Bruce Roger	Kingsport	TN		

US-CL-CURRENT: 528/308.1; 425/6, 526/64, 526/65, 526/71, 528/308.6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 9. Document ID: US 6861494 B2

L5: Entry 9 of 21

File: USPT

Mar 1, 2005

US-PAT-NO: 6861494

DOCUMENT-IDENTIFIER: US 6861494 B2

TITLE: Polyester process using a pipe reactor

DATE-ISSUED: March 1, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Debruin; Bruce Roger	Kingsport	TN		

US-CL-CURRENT: 528/272; 524/81, 526/64, 526/65, 526/67, 526/71, 528/176, 528/300, 528/301, 528/302, 528/307, 528/308, 528/308.6

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw De
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☐ 10. Document ID: US 6605190 B1

L5: Entry 10 of 21

File: USPT

Aug 12, 2003

US-PAT-NO: 6605190
DOCUMENT-IDENTIFIER: US 6605190 B1

TITLE: Staged optimal externally-controlled systems and method thereof

DATE-ISSUED: August 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Salamon; Peter	San Diego	CA		
Andresen; Bjarne Bogeskov	Vaerlose			DK
Nulton; James Darwin	San Diego	CA		

US-CL-CURRENT: 203/1; 202/160, 202/206, 203/100, 203/2, 203/3, 203/DIG.4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Figures	Attachments	Claims	KVMC	Draw De
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☐ 11. Document ID: US 6518465 B2

L5: Entry 11 of 21

File: USPT

Feb 11, 2003

US-PAT-NO: 6518465
DOCUMENT-IDENTIFIER: US 6518465 B2

TITLE: Reactive distillation process for hydrolysis of esters

DATE-ISSUED: February 11, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hoyme; Craig Alan	Kingsport	TN		
Holcombe, III; Edwin Franklin	Cogan Station	PA		

US-CL-CURRENT: 568/698; 562/607, 562/608, 568/907

Full	Title	Citation	Front	Review	Classification	Date	Reference	Figures	Attachments	Claims	KVMC	Draw De
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☐ 12. Document ID: US 6088630 A

L5: Entry 12 of 21

File: USPT

Jul 11, 2000

US-PAT-NO: 6088630
DOCUMENT-IDENTIFIER: US 6088630 A

TITLE: Automatic control system for unit operation

DATE-ISSUED: July 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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Cawlfeld; David W. Athens TN

US-CL-CURRENT: 700/266; 202/160, 203/2, 203/DIG.18, 204/225, 205/337, 700/270

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw De
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☐ 13. Document ID: US 6033635 A

L5: Entry 13 of 21

File: USPT

Mar 7, 2000

US-PAT-NO: 6033635

DOCUMENT-IDENTIFIER: US 6033635 A

** See image for Certificate of Correction **

TITLE: Method and system for bisphenol a production using water

DATE-ISSUED: March 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gammill; Ben	Austin	TX	78702	

US-CL-CURRENT: 422/245.1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw De
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☐ 14. Document ID: US 5959158 A

L5: Entry 14 of 21

File: USPT

Sep 28, 1999

US-PAT-NO: 5959158

DOCUMENT-IDENTIFIER: US 5959158 A

TITLE: Method and system for bisphenol a production using water

DATE-ISSUED: September 28, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gammill; Ben	Austin	TX	78702	

US-CL-CURRENT: 568/718; 568/716, 568/717, 568/722

Full	Title	Citation	Front	Review	Classification	Date	Reference	Abstract	Claims	KWIC	Draw De
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☐ 15. Document ID: US 5874644 A

L5: Entry 15 of 21

File: USPT

Feb 23, 1999

US-PAT-NO: 5874644

DOCUMENT-IDENTIFIER: US 5874644 A

**** See image for Certificate of Correction ****

TITLE: Method and system for bisphenol a production using controlled turbulence

DATE-ISSUED: February 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gammill; Ben	Austin	TX	78702	

US-CL-CURRENT: 568/724; 568/722, 568/727, 568/728

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw De
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☐ 16. Document ID: US 5784538 A

L5: Entry 16 of 21

File: USPT

Jul 21, 1998

US-PAT-NO: 5784538

DOCUMENT-IDENTIFIER: US 5784538 A

**** See image for Certificate of Correction ****TITLE: Process and apparatus for predicting and controlling flood and carryover conditions in a separation column

DATE-ISSUED: July 21, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Dzyacky; George E.	St. John	IN	46373	

US-CL-CURRENT: 706/45

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw De
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☐ 17. Document ID: US 5532389 A

L5: Entry 17 of 21

File: USPT

Jul 2, 1996

US-PAT-NO: 5532389

DOCUMENT-IDENTIFIER: US 5532389 A

TITLE: Process for preparing alkylene oxides

DATE-ISSUED: July 2, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Trent; David L.	Lake Jackson	TX		

Quarderer; George J.	Midland	MI
Bargeron; Kim G.	Midland	MI
Greminger; Douglas C.	Midland	MI
Koraneck; David J.	Lake Jackson	TX
Stewart; Erik J.	Brazoria	TX
Swisher; Curtis N.	Lake Jackson	TX
Tirtowidjojo; Cheryl A.	Lake Jackson	TX
Tirtowidjojo; Danil	Lake Jackson	TX

US-CL-CURRENT: 549/522; 423/473, 423/474, 549/521, 568/847, 568/850

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw De
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☐ 18. Document ID: US 4902385 A

L5: Entry 18 of 21

File: USPT

Feb 20, 1990

US-PAT-NO: 4902385

DOCUMENT-IDENTIFIER: US 4902385 A

TITLE: Process for the purifying distillation of crude sec-butyl alcohol

DATE-ISSUED: February 20, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Osterburg; Gunther	Rheurdt			DE

US-CL-CURRENT: 203/96; 203/18, 203/2, 203/39, 203/46, 203/83, 203/85, 203/97,
568/895, 568/913

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw De
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☐ 19. Document ID: US 4544452 A

L5: Entry 19 of 21

File: USPT

Oct 1, 1985

US-PAT-NO: 4544452

DOCUMENT-IDENTIFIER: US 4544452 A

TITLE: Control of a fractional distillation process

DATE-ISSUED: October 1, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Halliday; Mary M.	Old Ocean	TX		
Jackson; Glen R.	Bay City	TX		

US-CL-CURRENT: 203/1; 202/160, 202/206, 203/2, 203/3, 62/628, 700/270, 700/282

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw D
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☐ 20. Document ID: US 4526657 A

L5: Entry 20 of 21

File: USPT

Jul 2, 1985

US-PAT-NO: 4526657

DOCUMENT-IDENTIFIER: US 4526657 A

TITLE: Control of a fractional distillation process

DATE-ISSUED: July 2, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hobbs; James W.	Sweeny	TX		
Halliday; Mary M.	Sweeny	TX		

US-CL-CURRENT: 203/3; 196/132, 202/160, 202/206, 203/1, 203/2, 585/809, 700/270, 700/282

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw D
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Bkwd Refs

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Term	Documents
TRAYS	52005
TRAY	131586
TEMPERATURE?	0
TEMPERATUREA	14
TEMPERATUREC	12
TEMPERATURED	177
TEMPERATUREE	52
TEMPERATUREF	5
TEMPERATUREH	3
TEMPERATUREI	1
TEMPERATUREL	9
(L4 AND (TEMPERATURE? SAME TRAYS)).PGPB,USPT.	21

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☐ 1. Document ID: US 20050091020 A1

Using default format because multiple data bases are involved.

L8: Entry 1 of 6

File: PGPB

Apr 28, 2005

PGPUB-DOCUMENT-NUMBER: 20050091020

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050091020 A1

TITLE: High fidelity low-order modeling for multi-staged separation processes based upon the compartmental approach

PUBLICATION-DATE: April 28, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Cheng, Wai Biu	Willoughby	OH	US

US-CL-CURRENT: 703/12; 700/273

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw De
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☐ 2. Document ID: US 6605190 B1

L8: Entry 2 of 6

File: USPT

Aug 12, 2003

US-PAT-NO: 6605190

DOCUMENT-IDENTIFIER: US 6605190 B1

TITLE: Staged optimal externally-controlled systems and method thereof

DATE-ISSUED: August 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Salamon; Peter	San Diego	CA		
Andresen; Bjarne Bogeskov	Vaerlose			DK
Nulton; James Darwin	San Diego	CA		

US-CL-CURRENT: 203/1; 202/160, 202/206, 203/100, 203/2, 203/3, 203/DIG.4

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw De
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☐ 3. Document ID: US 6088630 A

L8: Entry 3 of 6

File: USPT

Jul 11, 2000

US-PAT-NO: 6088630

DOCUMENT-IDENTIFIER: US 6088630 A

TITLE: Automatic control system for unit operation

DATE-ISSUED: July 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cawlfeld; David W.	Athens	TN		

US-CL-CURRENT: 700/266; 202/160, 203/2, 203/DIG.18, 204/225, 205/337, 700/270

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw. De
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☐ 4. Document ID: US 4902385 A

L8: Entry 4 of 6

File: USPT

Feb 20, 1990

US-PAT-NO: 4902385

DOCUMENT-IDENTIFIER: US 4902385 A

TITLE: Process for the purifying distillation of crude sec-butyl alcohol

DATE-ISSUED: February 20, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Osterburg; Gunther	Rheurd			DE

US-CL-CURRENT: 203/96; 203/18, 203/2, 203/39, 203/46, 203/83, 203/85, 203/97,
568/895, 568/913

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWC	Draw. De
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☐ 5. Document ID: US 4544452 A

L8: Entry 5 of 6

File: USPT

Oct 1, 1985

US-PAT-NO: 4544452

DOCUMENT-IDENTIFIER: US 4544452 A

TITLE: Control of a fractional distillation process

DATE-ISSUED: October 1, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Halliday; Mary M.	Old Ocean	TX		
Jackson; Glen R.	Bay City	TX		

US-CL-CURRENT: 203/1; 202/160, 202/206, 203/2, 203/3, 62/628, 700/270, 700/282

Full	Title	Citation	Front	Review	Classification	Date	Reference	SPRINT	SPRINT	Claims	KWC	Draw De
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☐ 6. Document ID: US 4526657 A

L8: Entry 6 of 6

File: USPT

Jul 2, 1985

US-PAT-NO: 4526657

DOCUMENT-IDENTIFIER: US 4526657 A

TITLE: Control of a fractional distillation process

DATE-ISSUED: July 2, 1985

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hobbs; James W.	Sweeny	TX		
Halliday; Mary M.	Sweeny	TX		

US-CL-CURRENT: 203/3; 196/132, 202/160, 202/206, 203/1, 203/2, 585/809, 700/270, 700/282

Full	Title	Citation	Front	Review	Classification	Date	Reference	SPRINT	SPRINT	Claims	KWC	Draw De
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Term	Documents
TRAYS	52005
TRAY	131586
TEMPERATURE?	0
TEMPERATUREA	14
TEMPERATUREC	12
TEMPERATURED	177
TEMPERATUREE	52
TEMPERATUREF	5
TEMPERATUREH	3
TEMPERATUREI	1
TEMPERATUREL	9